

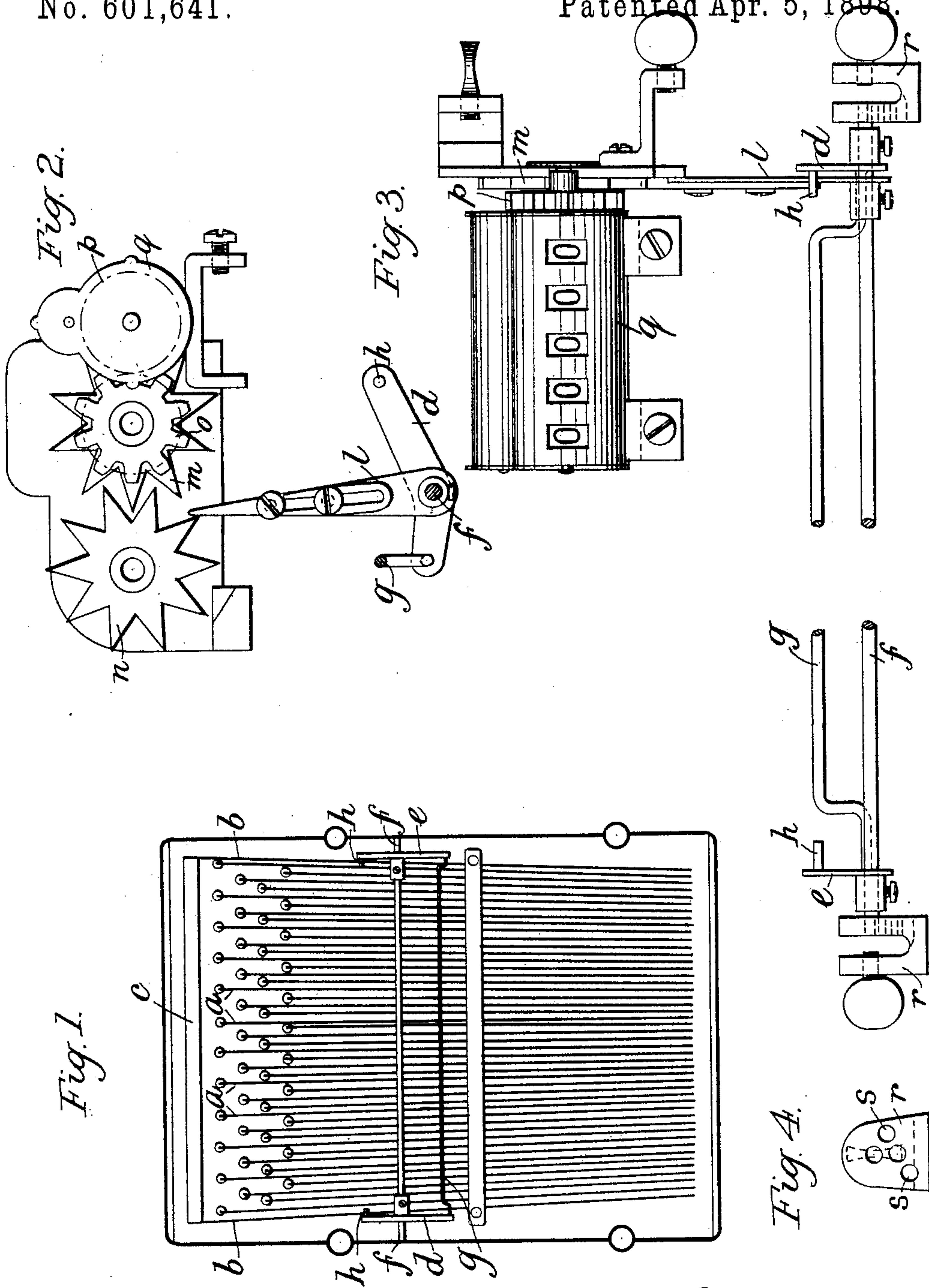
(No Model.)

W. FISH.

COUNTING APPARATUS FOR TYPE WRITERS OR LIKE MACHINES.

No. 601,641.

Patented Apr. 5, 1898.



Witnesses.
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COUNTING APPARATUS FOR TYPE-WRITERS OR LIKE MACHINES.

SPECIFICATION forming part of Letters Patent No. 601,641, dated April 5, 1898.

Application filed May 11, 1896. Serial No. 591,141. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM FISH, a subject of the Queen of Great Britain and Ireland, residing at High street, Wellingborough, in the county of Northampton, England, have invented certain new and useful Improvements in Counting Apparatus for Type-Writers or Like Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to register automatically the number of words written by the type-writer, and thus to save the trouble of counting the words in the written document in order to ascertain its length; and the invention consists in causing the usual spacing-key when it is operated after the use of any letter or figure key to also actuate a counter mechanism. When the spacing-key is pressed down, it actuates a lever, moving the counter mechanism one unit forward. The registering-lever is so placed with reference to the spacing-key that when it has been once actuated thereby it is put out of gear and remains out of gear however many times the spacing-key may be pressed and released in succession. It is, however, brought into play again the first time a letter-key or figure-key is pressed. One arrangement for carrying this into effect consists in two equal wheels gearing into one another and operated, respectively, by a letter or figure key and a space-key, and in arranging the first depression of a letter or figure key to move the letter-wheel through the space corresponding to one-half a tooth and bring a tooth of the space-wheel into position to be operated. The next depression of a spacing-key moves the space-wheel through half a tooth and brings a tooth of the letter-wheel into position to be operated by the next depression of a letter-key. It will thus be seen that the wheels are only rotated through one division for each word with its corresponding space typed.

In the accompanying sheet of illustrative drawings, Figure 1 is an inverted diagrammatic plan of a Remington type-writer fitted with a counter apparatus constructed according to this invention. Figs. 2 and 3 are end and front elevations, respectively, showing

the arrangement of parts by which the counter is actuated, the frame of the type-writer not being shown; and Fig. 4 is a detail view.

There are forty-six letter-levers *a* and two spacing-levers *b*. The spacing-levers *b* are arranged one on each side of the machine and connected by the cross-bar *c*, forming a spacing-key. Two rocking levers *d e* are mounted on a shaft *f*, bearing in holes drilled in bearing-pieces adapted to be clamped or otherwise attached to the side frame of the type-writer below the level of the levers, as shown in Fig. 2, so that the shaft *f* is below the levers. The bearing-pieces are provided with a number of holes located at different heights, as shown, to allow of adjustment of the height of the shaft *f* to suit different machines. The back ends of the levers *d e* are joined by a bar *g*, cranked where it passes the spacing-levers *b*. The bar *g* passes directly under the levers *a* and is adapted to be operated by them, but on account of the cranks it cannot be operated by the levers *b*. The front ends of the levers *d e* are provided with projections *h*, passing under the levers *b* only, so that the levers *b* operate them.

The action is as follows: On depressing the spacing-key the front ends of the levers *d e*, if not already in that position, are depressed and remain in that position however many times the spacing-key is depressed. In a similar manner when a letter-key is depressed one of the levers *a* acts on the bar *g* and depresses the back ends of the levers, the levers remaining in that position until the spacing-key is again operated. The levers *d e* are thus given a backward-and-forward motion for each word with its corresponding space typed. The motion of the levers is used to operate any suitable counting or registering mechanism. As shown, the lever *d* is provided with an arm *l*, that acts between two star-wheels *m n*, gearing with one another and having ten teeth. In its forward motion the arm *l* actuates the wheel *m* through slightly more than half one tooth, and in its backward motion it actuates the wheel *n* through the same distance. Thus the total motion (allowing for backlash) as these two wheels are in gear is one tooth. Attached to or forming part of the star-wheel *m* is a spur-wheel *o*, the said spur-wheel gearing with another

similar spur-wheel *p* upon the axis of the counter *q*.

As shown, all the parts are supported in socket-plates arranged to be clamped on with
5 thumb-screws to suitable parts of the frame of the type-writer, so that the counter apparatus can readily be applied to existing type-writers. It may, however, be constructed as a permanent attachment by drilling holes in
10 the side frame of the type-writer.

Although described with reference to a Remington type-writer, it is obvious that the counter apparatus is readily applicable to most other makes of type-writers, the socket-
15 plates being arranged with reference to the construction of frame of such type-writers.

What I claim, and desire to secure by Letters Patent, is—

A counting or registering mechanism for a
20 type-writer consisting of two rotating wheels geared into one another and connected to a

suitable counting or registering mechanism, an oscillating lever-arm oscillating between two teeth one on each wheel so that by the oscillation to one side the arm acts on the
25 tooth of one wheel to move it and consequently both wheels through one-half a tooth-space and by the oscillation to the other side the arm then acts on a tooth of the other wheel and completes the motion through a
30 complete space, a means for actuating the lever-arm in one direction from the letter-keys, and a means for actuating the lever-arm in the reverse direction from the spacing-
35 key.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM FISII.

Witnesses:

W. J. NORWOOD,
GEO. J. B. FRANKLIN.